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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,988	04/18/2001	Scott Douglas Olmstead	LUC-307/OLMSTEAD	9065
32205	7590	03/08/2005	3-1-1-2	
PATTI & BRILL ONE NORTH LASALLE STREET 44TH FLOOR CHICAGO, IL 60602			EXAMINER FOX, BRYAN J	
			ART UNIT	PAPER NUMBER
			2686	

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/836,988	Applicant(s) OLMSTEAD ET AL.	
	Examiner Bryan J Fox	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/18/2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,6,7,16,21 and 24-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,6,7,16,21 and 24-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 18, 2004 has been entered.

Claim Objections

Claim 16 recites the limitation "the first and second networks" in line 3, and again in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the first network" in line 5, and again in lines 14-15. There is insufficient antecedent basis for this limitation in the claim.

Claim 16 recites the limitation "the second network" in line 4, and again in lines 5, 6 and 10. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 4, 16, 21, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (US005890063A) in view of Ahrens (US005848144A).

Regarding claim 1, Mills discloses a system to transport signals to a mobile station ported from one HLR to another HLR where mobile subscribers relocate from a first service area served by a first HLR to a second service area served by a second HLR (see column 1, lines 39-42), which reads on the claimed "migrating subscribers from a first network to a second network". The system transfers an IAM from another network, or incoming signal (see column 8, lines 9-10) from the GMSC 80 a in a first network to the GMSC 80 b in a second network (see column 8, lines 34-41), which reads on the claimed "transferring at least one connection from at least one other network from a gateway mobile switching center of the first network (GMSC1) to a gateway mobile switching center of the second network." The second HLR 90b identifies the MSC currently serving the MS (see figure 9 and column 8, lines 24-60), which reads on the claimed "updating a home location register (HLR) in the second network with routing information about subscribers now served by the second network that were previously served by the first network." The HLR is queried for routing information, and if the number is in the network, the correct routing information is returned. However, if the number has been ported, the HLR returns the new HLR and the call is rerouted (see column 8, lines 34-60). This meets the limitation of "if routing information for the destination subscriber is available from the HLR in response to the query, the GMSC2 routes the call to the second network; if no routing information is available in response to the query, the GMSC2 routes the call to the first network." Call

Art Unit: 2686

requests are directed to the first GMSC (see figure 9), in contrast to the claimed invention where call requests are directed to the second GMSC. Mills also fails to expressly disclose that the first network employs a different technology than the second network.

In a similar field of endeavor, Ahrens discloses a switch cutover and expressly discloses that the cutover would be to replace obsolete technology (see column 2, lines 22-34). Since an obsolete network is being replaced with a newer network, the two networks must use different technologies, which reads on the claimed "the second network employs a network technology different than a network technology employed by the first". Further, after a midpoint of migrating subscribers, all traffic is routed to the post-cut switch (see figures 3 and 5a-5d), which reads on the claimed invention that directs all call requests to the switch of the second network.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Mills to include the above routing to the post-cut switch after a midpoint and networks using different technologies disclosed by Ahrens in order to provide more compatibility among systems and reduce the required capacity of the cutover facility.

Regarding claim 4, the combination of Mills and Ahrens discloses that if an incoming signal is received by the original network that is intended for the new network, the new network address is returned to the GMSC (see Mills column 2, lines 62-67 and column 3, lines 1-4). By returning the new network address to the GMSC, the original network is informing the GMSC that routing information is not available in its network.

Regarding claim 16, Mills discloses a system to transport signals to a mobile station ported from one HLR to another HLR where mobile subscribers relocate from a first service area served by a first HLR to a second service area served by a second HLR (see column 1, lines 39-42). An IAM from another network, or incoming signal is received at the GMSC 80a (see column 8, lines 9-10), which reads on the claimed "receiver arranged and constructed to receive a first call directed to a first subscriber, wherein the first subscriber is associated with one of the first and second networks," and, "the receiver receiving all calls directed to subscribers of the first and second networks." The GMSC 80a requests routing information from HLR 90a (see column 8, lines 24-27 and figures 8 and 9), which reads on the claimed "home location register (HLR) serving the second network where the HLR contains routing information for subscribers of the second network," and, "query device arranged and constructed to query the HLR of the second network to obtain routing information for the call." If the number has been ported away, the HLR does not have routing information, but instead points to HLR 90b containing the routing information (see column 8, lines 28-37), which reads on the claimed "router coupled to the query device that will route the first call to the second network if a query by the query device for routing information about the first subscriber obtains routing information for the first subscriber from the HLR, the router routing the first call to the first network if a query by the query device for routing information about the first subscriber does not obtain any routing information for the first subscriber from the HLR." Mills fails to expressly disclose that the second network employs a different technology than the first network.

In a similar field of endeavor, Ahrens discloses a switch cutover and expressly discloses that the cutover would be to replace obsolete technology (see column 2, lines 22-34). Since an obsolete network is being replaced with a newer network, the two networks must use different technologies, which reads on the claimed "the second network employs a network technology different than a network technology employed by the first."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Mills to include the above networks using different technologies disclosed by Ahrens in order to provide more compatibility among systems.

Regarding claim 21, the above combination of Mills and Ahrens discloses that the receiver is a GMSC (see Mills column 8, lines 9-12 and figures 8 and 9).

Regarding claim 24, Mills discloses a system to transport signals to a mobile station ported from one HLR to another HLR where mobile subscribers relocate from a first service area served by a first HLR to a second service area served by a second HLR (see column 1, lines 39-42), which reads on the claimed "migrating subscribers from a first network to a second network". The system transfers an IAM from another network, or incoming signal (see column 8, lines 9-10) from the GMSC 80 a in a first network to the GMSC 80 b in a second network (see column 8, lines 34-41), which reads on the claimed "transferring at least one connection from at least one other network from a gateway mobile switching center of the first network (GMSC1) to a gateway mobile switching center of the second network," and, "directing a call from the at least one other network to a subscriber of the subscribers at the first network to the

Art Unit: 2686

gateway mobile switching center of the second network." Mills fails to expressly disclose that the first network employs a different technology than the second network and the updating of routing tables.

In a similar field of endeavor, Ahrens discloses a switch cutover and expressly discloses that the cutover would be to replace obsolete technology (see column 2, lines 22-34). Since an obsolete network is being replaced with a newer network, the two networks must use different technologies, which reads on the claimed "the second network employs a network technology different than a network technology employed by the first". Further, Ahrens discloses that after a midpoint is hit, the routing from the end office is changed from the pre-cut switch to the post-cut switch (see figures 5a-5d), which reads on the claimed "changing one of more routing tables of a third network from the initiating the call to the first network to initiating the call tot eh second network; wherein the step of changing the one or more routing tables of the third network from initiating the call to the first network to initiating the call to the second network includes the steps of: provisioning one or more of the one or more routing tables of the third network to direct calls to the gateway mobile switching center of the second network; removing one or more connections between the third network and the gateway mobile switching center of the first network."

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Mills to include the above routing to the post-cut switch after a midpoint and networks using different technologies disclosed by Ahrens in order to

Art Unit: 2686

provide more compatibility among systems and reduce the required capacity of the cutover facility.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills in view of Ahrens as applied to claim 1 above, and further in view of Houde et al (US005978678A).

Regarding claim 6, the combination of Mills and Ahrens fails to expressly disclose sending, to a home location register of the first network, a message notifying the first network that a subscriber associated with the call is active on the second network when the GMSC2 routes the call to the second network.

In a similar field of endeavor, Houde et al discloses a system where when a mobile is roaming and an incoming call is received, the roaming network sends to the HLR of the home network a temporary local directory number (see column 5, lines 5-62 and figure 3).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the combination of Mills and Ahrens with Houde et al to include the above message to the HLR when routing a call in order to update the HLR with the most current location of the mobile and simplify future call routings.

Claims 7, 25 and 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills in view of Ahrens as applied to claims 1 and 16 above, and further in view of what was well known at the time of the invention (see MPEP 2144.03).

Art Unit: 2686

Regarding claim 7, the combination of Mills and Ahrens discloses that the networks can be GSM (see Mills column 1, lines 22-23). Mills fails to disclose that the first network is a TDMA network. The examiner takes official notice that a TDMA network was well known in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a TDMA network in the first network of the combination of Mills and Ahrens in order to have the advantages of a TDMA network such as improved system capacity and low noise.

Regarding claim 25, the combination of Mills and Ahrens discloses that the networks can be GSM (see Mills column 1, lines 22-23), which reads on the claimed "network technology of the first network comprises one of...a global system for mobile communication network technology". Mills fails to disclose that the second network is a TDMA network.

The examiner takes official notice that a TDMA network was known in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a TDMA network in the first network of the combination of Mills and Ahrens in order to have the advantages of a TDMA network such as improved system capacity and low noise.

Regarding claim 26, the combination of Mills and Ahrens discloses that the networks can be GSM (see Mills column 1, lines 22-23), which reads on the claimed "network technology of the first network comprises one of...a global system for mobile

Art Unit: 2686

communication network technology". Mills fails to disclose that the second network is a TDMA network.

The examiner takes official notice that a TDMA network was known in the art at the time of the invention.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a TDMA network in the first network of the combination of Mills and Ahrens in order to have the advantages of a TDMA network such as improved system capacity and low noise.

Response to Arguments

Applicant's arguments with respect to claims 1 and 16 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the advantages of TDMA networks such as increased capacity and low noise are generally available to one of ordinary skill in the art. These advantages also provide motivation to update a network.

Conclusion

Art Unit: 2686

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bryan J Fox whose telephone number is (703) 305-8994. The examiner can normally be reached on Monday through Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bryan Fox
February 22, 2005


CHARLES APPIAH
PRIMARY EXAMINER